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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/653,060	09/01/2000	Robert W. Heath JR.	GIGA-001	5498

7590

11/19/2003

BLAKELY, SOKOLOFF, TAYLOR & ZAFMAN LLP  
12400 Wilshire Boulevard, Seventh floor  
Los Angeles, CA 90025

EXAMINER
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WAHBA, ANDREW W

ART UNIT	PAPER NUMBER
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2661

DATE MAILED: 11/19/2003

8

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/653,060

Applicant(s)

HEATH ET AL.

Examiner

Andrew W Wahba

Art Unit

2661

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-51 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3, 6, 7, 17, 18, 20-24, 27, 32-35, 43, 47-49 and 51 is/are rejected.
- 7) ☒ Claim(s) 8-16, 19, 25, 26, 28, 29-31, 36-42, 44, 45, 46, and 50 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_ 6) ☐ Other: .

***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 6, 27, and, 51 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. With regard to claims 6, 27 and 51, the manner in which “wavelength division multiple access” and “wavelet division multiple access” pertain to this invention is *not* adequately described in the specification.

***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-3,6,7,17,18,20-24,27,32-35,43,47-49 and 51 are rejected under 35 U.S.C. 102(b) as being anticipated by Paulraj et al. With specific regard to claims 1 and 23, Paulraj et al discloses a method and apparatus for implementing both spatial multiplexing and non-spatial multiplexing (column 1, lines 53-56). Referring to Figures 13 A and 13B, Paulraj et al discloses a mode decision process that determines whether

a spatial or traditional communication method will be employed upon receiving a data stream.

With regard to claims 2, 3, 24, 47, 48 and 49, the mode decision element in Figure 13A, element 1302, determines whether or not a spatial or traditional communication method will be employed upon receiving a data stream. In the determination of whether or not to employ spatial multiplexing, Paulraj et al employs the use of QoS and bit rates, which would inherently be compared to threshold values (column 32, line 57).

With regard to claims 6, 18, 20, 27, and 51, Paulraj et al discloses a method and apparatus for implementing both spatial multiplexing and non-spatial multiplexing. Referring to Figures 13 A and 13B, Paulraj et al discloses a mode decision process that determines whether a spatial or traditional communication method will be employed upon receiving a data stream. The traditional communication methods include TDMA, FDMA, CDMA, SDMA and other multiple access protocols known to one skilled in the art (column 7, lines 45-49).

With specific regard to claims 7, 32, and 43, Paulraj et al discloses a method and apparatus for implementing both spatial multiplexing and non-spatial multiplexing. Referring to Figures 13 A and 13B, Paulraj et al discloses a mode decision process that determines whether a spatial or traditional communication method will be employed upon receiving a data stream. In addition, a control signal is generated to determine whether spatial configuration is required in process 1384 of figure 13B (column 35, lines 12-13).

With regard to claims 33 and 34, in the event of a handoff, Paulraj et al discloses a method the determination to operate in either spatial multiplexing or non-spatial multiplexing is reevaluated as shown in Figure 13A.

With respect to claim 17, 21, 22 and 35, either the base station or the subscriber unit may determine whether a spatial reconfiguration is necessary (column 11, lines 8-14).

***Allowable Subject Matter***

5. Claims 8-16, 19, 25, 26, 28, 29-31, 36-42, 44, 45, 46, and 50 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew W Wahba whose telephone number is (703) 305-4684. The examiner can normally be reached on M-F 8:30-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Douglas W Olms can be reached on (703) 305-4703. The fax phone number for the organization where this application or proceeding is assigned is (703) 305-9509.

Application/Control Number: 09/653,060  
Art Unit: 2661

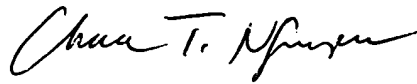
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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

Andrew Wahba



November 13, 2003



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